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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/035,962

11/09/2001

Vernon Gardiner

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EXAMINER

COLE, LAURA C

ART UNIT

PAPER NUMBER

1744

DATE MAILED: 10/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/035,962

Applicant(s)

GARDINER, VERNON

Examiner

Laura C Cole

Art Unit

1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-11 is/are rejected.
- 7) ☒ Claim(s) 2 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The Information Disclosure Statement filed 04 March 2002 (Paper No. 2) has been considered, however reference "AK" to the website <http://www.radiustoothbrush.com> does not have a publication date and therefore a line is drawn through.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: "24" (Figures 9A and 9B). A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the tuft of bristles further comprising an interior set of bristles and two exterior sets of bristles, wherein said exterior sets sandwich the interior set of bristles and a middle section of the bristles in the exterior set is positioned perpendicularly to the middle section of the bristles in the interior (Claim 7) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claim 7 is objected to because of the following informalities: It is unclear from the drawings or specification what is meant by "*each tuft* of bristles further comprises an interior set of bristles and two exterior sets of bristles..." in Claims 1-2. There is no discussion of sets of a tuft of bristle being sandwiching, exterior, interior, or perpendicular as Claim 7 states. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 10-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Stvartak et al., USPN 6,601,272.

Stvartak et al. disclose the claimed invention including at least four thumb grips arranged radially around an axis of a handle (see Figures 4 and 17-20, a number of embodiments displaying a handle cross section), wherein the thumb grips comprise a

Art Unit: 1744

concave area with a plurality of raised parallel ridge (ridges adjoining the concave areas, Figures 4, 17-18, or separate as shown in Figures 19-20, or (72)), and wherein the cross-section of said handle is elliptical (see Figures 4 and 17-20).

6. Claims 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Lukenbill, USPN D110,186.

Lukenbill discloses the claimed invention including at least four thumb grips arranged radially around an axis of a handle (see Figures, especially Figure 4), wherein the thumb grips comprise a concave area with a plurality of raised parallel ridge (Figure 4, the ridges being the adjoining sections), and wherein the cross-section of said handle is elliptical (Figure 4).

7. Claims 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Saltzman, USPN 2,304,319.

Saltzman discloses the claimed invention including at least four thumb grips arranged radially around an axis of a handle (see Figures 1-3), wherein the thumb grips comprise a concave area (17) with a plurality of raised parallel ridge (16), and wherein the cross-section of said handle is elliptical (see Figure 3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1744

8. Claims 1 and 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meunier, USPN 2,599,191 in view of Rider, USPN 2,317,485.

Meunier discloses a toothbrush comprising a handle (7) and a head (8) wherein there is a bristle sub-assembly comprising a plurality of U-shaped bristles (9, 14, 15) wherein a first and second ends of the bristles are embedded in the head (as shown in Figures 3-4) and that the middle section of the bristles form a flattened area (Figure 3 is generally flat while Figure 4 is more rounded). The middle section of the bristles in each tuft is at a 90 degree angle to the middle section of the bristles in the tuft directly adjacent to it (Figures 5 and 6, groupings (14) are perpendicular; Column 3 Line 70 to Column 4 Line 7.) The U-shaped bristles serve to brush, hold, and withdraw matter from the teeth (Column 1 Lines 16-23). Meunier does not disclose the bristles having a polygonal cross-section.

Rider discloses a toothbrush that bristles of a regular polygon cross-section, the regular polygon being specifically a triangle (Figure 5), a square (Figure 6), a pentagon (Figure 7), or a hexagon (Figure 8). Bristles of these shapes are advantageous to prevent the formation of interstitial openings (Page 2 Column 1 Lines 32-38) and so that the corned edges can clean more efficiently (Page 2 Column 2 Lines 1-18).

It would have been obvious for one of ordinary skill in the art to modify the U-shaped bristles with a round cross section of Meunier for bristles having a regular polygonal cross section such as the ones that Rider teaches so that the brushing is done faster and more effectively utilizing the corner edges of the polygonal shape.

9. Claims 1 and 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamilton, USPN 1,179,426 in view of Rider, USPN 2,317,485.

Hamilton discloses a toothbrush comprising a handle (1) and a head (3) wherein there is a bristle sub-assembly comprising a plurality of U-shaped bristles (4, 5) wherein a first and second ends of the bristles are embedded in the head (as shown in Figure 3; Page 1 Lines 77-85) and that the middle section of the bristles form a flattened area (Figure 3 is generally flat). The middle section of the bristles in each tuft is at a 90 degree angle to the middle section of the bristles in the tuft directly adjacent to it (see orientation in Figures 1 and 2 and placement in Figure 3; Page 1 Lines 68-76.) Further, the exterior sets of bristles (4) sandwich an interior set of bristles (5) and are positioned perpendicularly as seen in Figure 2. The U-shaped bristles are so that there is less scratching or injury without decreasing the cleaning properties of the brush (Page 1 Lines 85-89). Hamilton does not disclose the bristles having a polygonal cross-section.

Rider discloses all elements above.

It would have been obvious for one of ordinary skill in the art to modify the U-shaped bristles with a round cross section of Hamilton for bristles having a regular polygonal cross section such as the ones that Rider teaches so that the brushing is done faster and more effectively utilizing the corner edges of the polygonal shape.

10. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meunier, USPN 2,599,191 in view of Rider, USPN 2,317,485 and in further view of Stvartak et al., USPN 6,601,272.

Art Unit: 1744

Meunier, Rider, and Stvartak et al. disclose all elements above. Meunier and Rider do not disclose the toothbrush having a gripped handle.

It would have been obvious for one of ordinary skill in the art to modify the handles of Meunier and Rider for the one that Stvartak et al. teach in order to provide an advantageous gripping surface as necessary in the moist environment of the mouth area when brushing teeth.

11. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamilton, USPN 1,179,426 in view of Rider, USPN 2,317,485 and in further view of Stvartak et al., USPN 6,601,272.

Hamilton, Rider, and Stvartak et al. disclose all elements above. Hamilton and Rider do not disclose the toothbrush having a gripped handle.

It would have been obvious for one of ordinary skill in the art to modify the handles of Hamilton and Rider for the one that Stvartak et al. teach in order to provide an advantageous gripping surface as necessary in the moist environment of the mouth area when brushing teeth.

12. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meunier, USPN 2,599,191 in view of Rider, USPN 2,317,485 and in further view of Saltzman, USPN 2,304,319.

Meunier, Rider, and Saltzman disclose all elements above. Meunier and Rider do not disclose the toothbrush having a gripped handle.

It would have been obvious for one of ordinary skill in the art to modify the handles of Meunier and Rider for the one that Saltzman teaches in order to provide an

Art Unit: 1744

advantageous gripping surface as necessary in the moist environment of the mouth area when brushing teeth.

13. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamilton, USPN 1,179,426 in view of Rider, USPN 2,317,485 and in further view of Saltzman, USPN 2,304,319.

Hamilton, Rider, and Saltzman disclose all elements above. Hamilton and Rider do not disclose the toothbrush having a gripped handle.

It would have been obvious for one of ordinary skill in the art to modify the handles of Hamilton and Rider for the one that Saltzman teaches in order to provide an advantageous gripping surface as necessary in the moist environment of the mouth area when brushing teeth.

Allowable Subject Matter

14. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

None of the prior art of Paper No. 2, mentioned above, or additionally cited discloses a teaching where a middle portion of a U-shaped bristle would be twisted lengthwise so that a tooth contacts more than one corner of the polygon during brushing.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 1744

USPN 4,493,125 to Collis discloses a toothbrush with U-shaped bristles having a regular polygonal cross section, however there is a cut made in the middle portion of U-shaped to form ends (42, 44) to brush two sides of a tooth at once.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura C Cole whose telephone number is (703) 305-7279. The examiner can normally be reached on Monday-Thursday, 7am - 4:30pm, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Warden can be reached on (703) 308-2920. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

LCC
LCC

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